

Abstract of the Disclosure

A method and system that allows the distribution of hot spare space across multiple disk drives that also store the data and redundant data in a fully active array of redundant independent disks, so that an automatic rebuilding of the array to an array of the identical level of redundancy can be achieved with fewer disk drives. The method configures the array with D disk drives of B physical blocks each. N user data and redundant data blocks are allocated to each disk drive, and F free blocks are allocated as hot spare space to each disk drive, where $N + F \leq B$, and $((D - M) \times F) \geq N$. Thus, rebuilding of data and redundant blocks of a failed disk drive in the free blocks of the remaining disk drives is enabled after M disk drive failures.